1. TITLE

Examining the formative assessment of writing practices of middle school ELA classroom teachers

2. External IRB Review History*

N/A

3. Prior Approvals:

N/A

CONFLICT OF INTEREST (COI):

N/A

BIOHAZARDOUS AGENTS:

N/A

RADIATION:

N/A

4. BACKGROUND*

This study will examine the ways in which middle school ELA teachers integrate technology into the classroom to help support their use of formative assessment in writing instruction. The study is inspired by the lack of empirical research that offers a source for teachers to go to in order to improve on this practice. While significant research has been conducted in both the fields of formative assessment in relation to writing and the integration of technology, the combination of these two topics is not as common. This study seeks to bridge these two topics at a local level to build resources for teachers to improve their practice.

5. Objectives*

Researchers will gather qualitative data related to the practices of formative assessment for writing of middle school ELA teachers and their integration of technology to help support their practice. Researchers will work with the teaching team and students to determine the ways in which students are best supported in the writing process through teachers' use of formative assessment and classroom technology.

6. STUDY OUTCOMES*

This is a qualitative study that will help teachers determine the best practices of formative assessment in writing and the use of technology to support this.

7. Inclusion and Exclusion Criteria*

Students of the teacher participants will be included in this study. All students will be invited and those students providing assent together with a parent's consent will be placed in a pool, from which 5 students in each class will be randomly selected, with approximately equal numbers from the 7th and 8th grades.

8. Vulnerable Populations*

This study will contain a vulnerable population as I will be conducting a study using the students I teach as part of the studied group. In order to protect these subjects and their grades, teachers will not provide grades for their own students on the final rubric assessment. If a final grade is required, the assessment will be conducted by a teacher that is different from their own and will use the district provided rubric. Parental Letter of Consents will be collected from all subjects that will participant in this study. The consent will need to be signed by one parent or legal guardian and will be kept on location in a locked file cabinet.

9. SETTING

This study will take place in a grade 5-8 middle school in Lowell, Massachusetts focusing on 7^{th} and 8^{th} grade ELA teachers and students. Teacher participants are part of the same content team and all students in their classrooms who, with their parents, provide consent/assent, will be included in the study. Interviews of teachers will take place in the teacher's classrooms or other available spaces in the school like the teacher's lounge or copying room.

10. RESOURCES AVAILABLE

The PI will help the co-investigator in procedures and protocols training and assisting the co-investigator with data analysis. The co-investigator will develop the tools used in the investigation, conduct the interviews and observations. The PI and co-investigator will meet regularly to report the status of the study in progress, discuss potential challenges, and answer any questions the co-investigator may have. The co-investigator will be responsible for communicating to the participants the procedures of the study.

11. STUDY TIMELINES*

This study will be conducted over a 10-week period consisting of one reading and one writing unit. Teacher participants will meet weekly during common planning time to review relevant literature related to writing assessment and technology integration. Teacher participants will also participate in at least two observation sessions where they will record the practices of that teacher related to formative assessment and technology integration.

12. Number of Subjects*

The total number of teacher participants will be 3. 5 students will be randomly chosen from each team will have work analyzed before, during, and after the writing unit. A total of 15 students will have their work analyzed. 7 of these students will be in 8th grade and 8 of these students will be in 7th grade. Since the class size has not been determined at the date of this application, I will limit the sample of each team to 5 students total. Though a total of 15 students will be recruited for this study, all students enrolled in the classes with be given the opportunity to participate in

the study. This will ensure the appropriate number of participants will be available as part of the study.

13. Procedures Involved*

Teacher participants will be interviewed at the start of the study to determine their perception of their current formative assessment practices (See interview protocol in appendix). Teacher participants will then read relevant literature on formative assessment practices related to teaching middle school writing. They will then plan together lessons to implement the strategies that were read about. Samples of student writing will be taken before these strategies are implemented and will be scored using the district developed rubric. (See appendix). Students will then be given instruction and will be asked to write another writing sample. Teachers will apply various formative assessment techniques to the writing process and will record through journals (See appendix.) the techniques that were tried. They will record qualitative data regarding the way in which the students responded to instruction. The teacher participants will then meet and score this writing using the district developed rubric. Students will then be asked to revise their writing using the feedback that was given by the teacher. Teacher participants will then meet again to discuss which techniques that were applied that yielded the greatest increase in score improvement.

14. RECRUITMENT METHODS*

Teacher participants will be recruited by inviting them that they will be taking part in a study to examine current practices of formative assessment and technology integration. A short recruitment script is included in the appendix. They will be told that the practices that are observed and refined will be used to possibly make future recommendations to the curriculum and instruction directors. I will work directly with curriculum and instruction directors in the district to make these recommendations of best practices to implement. Student work will be randomly selected for analysis. To randomly select students, their student ID number will be entered into a spreadsheet separated by each class. 5 student ID numbers will be selected using the Excel RAND function. Students who have not returned consent forms, or forms that have not allowed consent for the study will not be included in the spreadsheet.

15. Consent Process*

Informed consent forms will be provided to all students in classes where teacher participants are the teacher of record. These forms will be translated using district services into the primary home language that is listed on the student information management system. Consent forms will be returned within one week of being passed to students.

16. PROCESS TO DOCUMENT CONSENT IN WRITING

Consent forms will be given to all students in classes at the start of the study. These forms will be collected within one week and retained in a locked file cabinet for no more than three years at the completion of the study.

17. WITHDRAWAL OF SUBJECTS WITHOUT THEIR CONSENT*

N/A

18. SHARING OF RESEARCH RESULTS WITH SUBJECTS*

Research results will be available upon request of the study participants, parents, or legal guardians.

19. Risks to Subjects*

This study has minimal risk to the participants. While students' grades are being assigned by teacher participants, this risk will be mitigated by making samples anonymous and by having teachers grade students from classrooms where they are not the teacher on record.

20. POTENTIAL DIRECT BENEFITS TO SUBJECTS*

N/A

21. Data and Specimen Analysis and Management*

All data will be stored on a password protected computer and accessible only to the research team. Participants will be assigned pseudonyms for reporting qualitative data.

22. Provisions to Monitor the Data to Ensure the Safety of Subjects*

N/A

23. DATA AND SPECIMEN BANKING*

N/A

24. Confidentiality

Data collected will be in the form of photocopies of student writing samples containing written teacher feedback as well as audio recordings and/or transcriptions of interviews with teacher participants. Participants will not be identified in notes or audio recordings. Electronic data will be stored on a password protected computer and paper copies of student work will be kept in a locking file cabinet. Data will be stored for no more than three years following the completion of the study.

25. Provisions to Protect the Privacy Interests of Subjects

Interviews will be conducted in the teacher's lounge, copy room, or any available space in the building that would allow for a one on one discussion. At the beginning of the interview the investigator will remind the interviewee that they can decline to answer a question without giving a reason or to opt out of the interview entirely at any time.

26. Compensation for Research-Related Injury

N/A

27. ECONOMIC BURDEN TO SUBJECTS

N/A

28. COMMUNITY-BASED PARTICIPATORY RESEARCH*

N/A

29. Multi-Site Research*

N/A

30. RESEARCH CONDUCTED IN A FOREIGN COUNTRY

N/A

31. Drugs or Devices

N/A

IRB Checklist

This checklist is provided for your convenience and is not a requirement for review.

| _ | Investigator Study Plan (ISP) |
|---|--|
| | Consent form(s) |
| _ | Assent forms(s) |
| _ | Fact sheet(s) |
| _ | Surveys, measures, instruments, etc. |
| _ | Data collection sheets, case report forms, etc. |
| | Recruitment materials such as flyers, brochures, posters, scripts of radio ads, etc. |
| + | Written approvals from <u>ancillary reviews</u> (COI, IBC, RSC,) |
| 1 | Adverse event log |
| | Approval order for Humanitarian Use Device |
| _ | Certificates of translation or translator attestationsFact sheet(s) |
| _ | Compensation logAssent forms(s) |
| | Data safety monitoring plan |
| | Data use agreements, memoranda of understanding, Multi-site communication plan |
| | DMC or DSMB charter |
|] | Documentation of data/specimen anonymity (i.e., provider will never break the |
| (| code)Study staff training plan |
| | HIPAA authorization |
|] | HIPAA waiver |
|] | IND or IDE documentation |
|] | Instructions for use or approved FDA labeling for devices |
| | Investigator brochure or package insert for drugs |
| | Measures to assess capacity to consent |
| | Multi-site communication plan |
| | Patient information sheet for Humanitarian Use Device |
|] | Product labeling for Humanitarian Use Device |
| | Screening logConsent form(s) |
| | SOPs or Manuals of Operations Authorization to contact form |
| | Sponsor justification or FDA documentation for non-significant risk device study |
| | Study staff training planHIPAA authorization |
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